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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,096	05/03/2001	Scott Andrew Merritt	JDSU-009	7089

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EXAMINER

NEGASH, KINFE MICHAEL

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,096

Applicant(s)

MERRITT, SCOTT ANDREW

Examiner

Kinfe-Michael Negash

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 which is a method claim depends on an apparatus claim 21. It appears that it was meant to depend on claim 22.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-10, 12-14, and 16-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Gerwen et al., alone or combined with Miller et al.,(U.S. Patent No. 5,930,231).

Van Gerwen et al., in Fig. 1 disclose an optical communication system comprising a data source(inherent at input 4); a modulator(8,9); a detector(11) that detects the modulated optical signal transmitted across an optical channel(3); and a receiver filter(13). Fig. 1 of van Gerwen et al., does not disclose the claimed transmission filter. However, Fig. 12 of van Gerwen et al., teaches the use of a transmission filter(39) in association with a receive filter(48) in a communication system. Moreover, Miller et al., at column 32, lines 60-67, teach that the use of a transmit filter in association with a receive filter is well known in the art. Hence, since the use of a transmission filter in communication systems is extremely well known in the art, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a transmission filter in Fig. 1 of van Gerwen et al.,(as needed) in order to insure the Nyquist criterion for zero intersymbol interference. Thus, claims 1,14, and 22-24 are rejected.

As to claim 2, van Gerwen et al., clearly teaches the subject matter of the claim(note element 3).

Regarding claims 3-4,7-10,17-20, and 26-27, the van Gerwen et al., reference is considered to meet the limitations of the claims.

Concerning claims 5-6 and 16, the above combination is considered to meet the limitations of the claims.

With regard to claims 12-13 and 21, van Gerwen et al., do not specify the claimed value or range of the autocorrelation function. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specify the claimed value or range of the autocorrelation function in van Gerwen et al., since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range or discovering an optimum value of a result effective variable involves only routine skill in the art. See *In re Aller*, 10 USPQ 233; *In re Boesch*, 617 F.2d 272, 205 USPQ 215(CCPA 1980). Therefore, claims 12-13 and 21 are rejected.

With regard to claim 25, van Gerwen et al., clearly teach the subject matter of the claim(note column 4, lines 21-38).

6. Claims 11 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over van Gerwen et al., alone or combined with Miller et al., as applied to claims 1 and 14 above, and further in view of IEEE Photonics Technology Letters, VOL. 3, NO 10, pp. 916-918.

The van Gerwen et al., reference discloses the claimed invention except for the substantially chirp-free modulator. Gnauck et al., in the above cited Photonics Technology Letters article disclose that the use of very low chirp modulators and chirp-free modulators is well known in the art(see page 916, second paragraph). Hence, in view of the above teaching, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a substantially chirp-free

modulator(such as Lithium niobate or Mach-zehnder modulators) in van Gerwen in order to minimize transmission power penalty caused by fiber chromatic dispersion. Thus, claims 11 and 15 are rejected.


Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Caplan et al., is cited for its teachings an optical communication system showing some features of the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kinf-Michael Negash whose telephone number is (703)305-4932. The examiner can normally be reached on 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kirfe-Michael Negash
Primary Examiner
Art Unit 2633

KN
February 11, 2004